Health Care Financing

Special Report

Marketing Medicare in a competitive environment

PUBS
RA
413
.7
A4
F75
1985

Health Care Financing Administration

Health Care Financing

Special Report

The Office of Research and Demonstrations, Health Care Financing Administration, directs more than 300 intramural and extramural research, demonstration, and evaluation projects. These projects seek alternate ways to finance, organize, and deliver health services, as well as assess the impact of Federal programs on health care costs, providers, and beneficiaries. The Health Care Financing *Special Report* series presents single theme reports that provide either in-depth coverage of an important issue in health care financing or a collection of papers on a selected topic drawn from a variety of sources.

Marketing Medicare in a Competitive Environment examines the factors influencing enrollment of Medicare beneficiaries, the methods used by the health maintenance organizations (HMO's) to promote the prepaid HMO Medicare alternative, and the degree of beneficiary satisfaction with the prepaid health plan choice.

The report is based on a survey of 1,800 Medicare beneficiaries and a marketing case study of four HMO Medicare demonstration projects in Minneapolis-St. Paul Minnesota.

This report identified three variables that appear important in potential Medicare HMO joiners. These variables are insurance status, the presence and degree of attachment to a usual source of care, and health status.

The report also provides a discussion of future directions for Medicare prepaid health plan marketing research.

RA
413.7
.A4
F75
1985

Health Care Financing

Special Report

Marketing Medicare in a competitive environment

U.S. Department of Health and Human Services
Health Care Financing Administration
Office of Research and Demonstrations
Baltimore, Maryland
August 1985

Acknowledgments

The authors would like to acknowledge the contributions of Jane Bergsten, Fred Bryan, Steven Garfinkel, William Schlenger, Michael Weeks, and B.J.G. York, all of the Research Triangle Institute in the design and execution of the survey on which this analysis is based. The authors would also like to acknowledge Bruce Carpenter and Peter Lin, Jurgovan and Blair, Inc., for assistance with data processing and Elizabeth Owen, independent consultant, for her insights into the Twin Cities market. The authors wish to thank HMO Minnesota, MedCenter Health Plan, Nicollet-Eitel Health Plan, SHARE Health Plan, and Medicare beneficiaries in the Twin Cities for their cooperation with the survey.

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

Contents

Introduction	**2**
Beneficiary choice and health maintenance organization marketing	**2**
The marketing environment	**4**
Study design and method	**5**
Results	**6**
Discussion	**16**
Future directions	**18**
References	**20**
Appendixes	
1. Premiums and benefit package	**21**
2. Survey methodology	**24**

Marketing Medicare in a competitive environment

by Alan Friedlob and James P. Hadley

Executive summary

In part, the Medicare program based the risk-based prospective reimbursement approach for health maintenance organizations (HMO's) and competitive medical plans contained in the Tax Equity and Fiscal Responsibility Act of 1982 on eight demonstration projects that began in 1980. The eight demonstrations were located in Worcester, Mass. (Fallon Community Health Plan); Lansing, Mich. (Health Central); Minneapolis-St. Paul, Minn. (HMO Minnesota, MedCenter Health Plan, SHARE Health Plan, and Nicollet-Eitel Health Plan); Portland, Oreg. (Kaiser/Portland); and Marshfield, Wis. (Greater Marshfield Community Health Plan).

Based on the experience of Minneapolis-St. Paul Medicare beneficiaries, this report is the first empirical study of the Medicare beneficiary as a consumer of both health insurance and health care delivery provided by risk-based alternatives to the existing Medicare program. Specifically, this report addresses the following questions:

- What is the relationship between beneficiary social and demographic characteristics and plan enrollment? Do the four Twin Cities' HMO's attract different segments of the Twin Cities' Medicare population?
- What are the effects of private health insurance, usual source of medical care, satisfaction with this usual source of medical care, and self-reported health status on motivating Medicare beneficiaries to consider the HMO alternative?
- How did the HMO's promote the Medicare alternative? How were Medicare beneficiaries informed about the Medicare demonstration and to what extent did beneficiaries comparison shop in reaching an enrollment decision?
- Why did Medicare beneficiaries choose to enroll in an HMO or alternatively choose to remain in the fee-for-service system?
- How satisfied are Medicare beneficiaries with the HMO alternative?

The results of this study are primarily based on a survey of approximately 1,800 Medicare beneficiaries residing in the Twin Cities metropolitan area, supplemented by a case study of plan marketing activities. The survey was designed to permit comparisons of enrollees in each of the four Medicare demonstration HMO's with an areawide statistically balanced nonenrollee comparison group and to permit comparisons between enrollees in each of the four plans.

Examination of these data indicates that three variables appear important in identifying potential Medicare HMO joiners—insurance status, usual source of care, and health status. In the early stages of Medicare enrollment, as evidenced in the Twin Cities, HMO enrollees are likely to be geographically concentrated in close proximity to the plan's primary care providers. Potential Medicare enrollees are thus likely to have personal characteristics (e.g., income, education, marital status) similar to the demographic profile of the areas surrounding HMO clinic sites or HMO-affiliated physicians' offices.

In the Twin Cities, enrollees generally carried less private health insurance than nonenrollees. This suggests that the HMO's marketing research task is to distinguish and focus marketing efforts on beneficiaries who have no private health insurance. For beneficiaries with private health insurance, data indicating high levels of dissatisfaction with physician fees and paperwork provide ample evidence for emphasizing the cost and time savings potential of the HMO alternative.

The HMO must also decide whether to focus marketing on beneficiaries who have used HMO affiliated physicians on a fee-for-service basis prior to joining (rollovers) or on beneficiaries with no prior affiliation with the HMO (switchers). Although 90 percent of Medicare beneficiaries have a usual source of care, not all beneficiaries are equally committed to what they would nominally define as this usual source of care. Staff and group model HMO's may have to expend the greatest amount of effort convincing beneficiaries that their usual source of care—whose professional competence, and access or amenities they are generally satisified with—is worth giving up to obtain a superior benefit package or reduce out-of-pocket costs.

As indicated by self-reported measures of health status, all four of the Twin Cities plans attracted beneficiaries who were healthier than the fee-for-service groups to whom they were compared.

Medicare beneficiaries became aware of the HMO alternatives in a variety of ways. The findings indicate the important role that word of mouth and print media can play in the enrollment decision. Television can create awareness about the concept of a prepaid option to Medicare beneficiaries, and through repetition and reinforcement of the plan's name (e.g. "Medicare and More"; "SeniorCare"; "Medicare-Plus"), television can help establish brand recognition for a specific HMO. With the likelihood of multiple Medicare prepaid health plans in a single market, name recognition is important in HMO marketing. Creating an identifiable plan image through television may trigger a request for additional written material on which the decision to enroll is ultimately based. The data also suggest the importance of physicians as HMO sales agents. The role that physicians can play in convincing Medicare beneficiaries to enroll in an HMO is most evident in IPA's such as HMO Minnesota. The role of the physician in HMO marketing to Medicare beneficiaries is worthy of considerably more research because of the potential for introducing selection bias through this marketing channel.

Beneficiaries from the four plans frequently cited good benefits and coverage as their principal reason for enrolling. Beneficiaries mentioned lower costs as the main reason for joining a plan less often. The high degree of enrollee satisfaction with all plans, coupled with the relatively small percent of beneficiaries who thought the plans should provide more benefits than were already being offered, confirms the perceived desirability of the HMO alternative for these beneficiaries in the Twin Cities market, at least at the time the survey was conducted. A discussion of future directions for Medicare prepaid health plan marketing research concludes the report.

Introduction

The effectiveness of a strategy to contain Medicare costs based on the growth of health maintenance organizations (HMO's) and competitive medical plans (CMP's) hinges on these organizations perceiving financial incentives in contracting with the Medicare program on a capitated risk basis and the willingness of Medicare beneficiaries to join such plans. This is the first empirical study of the Medicare beneficiary as a consumer of both health insurance and health care delivery provided by risk-based alternatives to the existing Medicare program. Beneficiary choice of risk-based prepaid health plans is analyzed and the characteristics of plan joiners, the reasons Medicare beneficiaries join HMO's, and beneficiary satisfaction with the HMO alternative are examined.

The experience of four HMO's in Minneapolis-St.Paul, Minn., provides the basis for this report. Data collected from Medicare beneficiaries of the Twin Cities provide insight into beneficiary choice of Medicare alternatives emerging in the 1980's. Much of this discussion is relevant to the public policy debate over the use of health care vouchers—that is, permitting Medicare beneficiaries to choose among various configurations of medical plans that might meet their health insurance and medical care needs (Friedman, LaTour, and Hughes, 1984).

Until recently, the Medicare program was unable to contract with HMO's on a completely prospective payment basis, and marketing by HMO's to Medicare beneficiaries was not widespread. Prepaid health plan providers criticized group health plan reimbursement provisions contained in Section 1876 of the Social Security Act because the retrospective cost-based reimbursement and cost-finding procedures used by Medicare differ substantially from an HMO's usual procedure of relying on prospectively determined reimbursement rates. This method of reimbursement may also fail to provide the HMO with sufficient financial incentive to generate savings or profit.

To overcome the barriers health maintenance organizations perceived in Medicare reimbursement and to encourage the growth of Medicare enrollment in prepaid health plans, Congress made provision in the Tax Equity and Fiscal Responsibility Act (TEFRA) of September 1982 for prospective reimbursement under risk-sharing contracts with HMO's and other eligible competitive medical plans at a rate equal to 95 percent of the adjusted average per capita cost (AAPCC) for Medicare beneficiaries. The AAPCC is the method used to estimate what HMO Medicare enrollees would have cost the Medicare program under the fee-for-service system.

Under this new contracting arrangement that went into effect January 1985, if the Medicare payment (i.e., 95 percent of AAPCC) exceeds the HMO's adjusted community rate (ACR), the HMO must use this savings to provide its Medicare enrollees with additional benefits beyond standard Medicare coverage of reduce beneficiary cost sharing (e.g., lower premium, deductibles, coinsurance). The ACR represents the HMO's cost of doing business with respect to its Medicare enrollees. Under TEFRA, the HMO's will prospectively determine their ACR's, and the Medicare program will review these ACR calculations. The ACR should return to the HMO the same margin of profit for its Medicare enrollees as for its commercial enrollees who are under 65 years of age.

In part, the Medicare program based the "95 percent of AAPCC" prospective reimbursement approach contained in TEFRA on eight Medicare prospective risk capitation demonstration projects that began enrolling Medicare beneficiaries in 1980. The eight demonstrations were located in Worcester, Mass. (Fallon Community Health Plan); Lansing, Mich. (Health Central); Minneapolis-St. Paul, Minn. (HMO Minnesota, MedCenter Health Plan, SHARE Health Plan, and Nicollet-Eitel Health Plan); Portland, Oreg. (Kaiser/Portland); and Marshfield, Wis. (Greater Marshfield Community Health Plan).

The Health Care Financing Administration (HCFA) awarded a contract to Jurgovan and Blair, Inc., in March 1981 to evaluate these demonstrations. The data analyzed here were collected as part of the Jurgovan and Blair evaluation. Before describing the study population and methodology, some hypotheses about beneficiary choice of Medicare alternatives and prepaid health plan marketing will be discussed. These hypotheses serve as a framework for the analysis that follows.

Beneficiary choice and health maintenance organization marketing

A Medicare beneficiary's decision to join an HMO involves evaluating features of the plan's health insurance coverage and health care delivery system. It is hypothesized that the greater their dissatisfaction with their current health insurance coverage and/or health care delivery system, the more likely Medicare beneficiaries are to attend to HMO marketing efforts. HMO marketing has dual objectives: to neutrally inform beneficiaries of the existance of an alternative to standard Medicare coverage and to persuasively "sell" the beneficiaries, convincing them to join a specific plan.

Having decided that a gap exists in their current health insurance coverage and/or medical services, Medicare beneficiaries can search for alternatives and weigh the potential gains from joining an HMO against the potential losses from switching from their current health insurance and health care delivery system. To attract beneficiaries, the HMO must be perceived as superior to standard Medicare coverage and must offer benefits that are more attractive than what the beneficiary has now.

However, little is known about preferences for the quantity and style of medical care and how consumer preferences

influence HMO enrollment decisions (Luft, 1981). In markets where more than one HMO has a risk-based Medicare contract, beneficiaries may not only weigh the value of an HMO compared with standard Medicare coverage and existing Medicare supplemental insurance but may also compare the advantages and disadvantages of HMO alternatives. This comparison may involve evaluating a number of factors, including differences in plan benefit packages, premium costs, choice of physician and hospital facilities, and location of plan services.

There have been no indepth studies of the determinants of HMO enrollment choice that have addressed the role that plan marketing plays in a person's decision process. The focus of previous research has been on identifying how variables associated with selecting an HMO may serve as predicators of the differences between the use and cost experience of HMO enrollees compared with persons who remain in the fee-for-service system (Luft, 1981).

Rather than crediting the influence marketing can have on individuals joining an HMO, prior research on enrollment choice of HMO's among persons under 65 years of age has characterized individuals' reasons for joining an HMO in two ways: as a response to a perceived vulnerability to illness and financial risk or as a lack of integration into the traditional fee-for-service system.

The perceived vulnerability hypothesis asserts that persons who assign a higher risk to the probability that they will use medical services and whose income levels place them at risk of higher than average out-of-pocket medical costs will tend to join HMO's (Berki et al., 1977). The perceived vulnerability hypothesis tends to argue for expecting that Medicare beneficiaries joining HMO's will be sicker than average and will have higher medical expenses prior to enrolling.

Alternatively, persons who enroll in an HMO may be less integrated into the standard fee-for-service health care delivery system (Gaus, 1971). Lack of integration is defined as not having an established physician relationship or as being more inclined to view the ties with a usual source of care as weak. In joining the HMO, these persons are willing to change physicians.

In contrast with the perceived vulnerability hypothesis, the lack of integration hypothesis tends to argue for expecting HMO enrollees to be "healthier" than their fee-for-service peers. Data from the National Medical Care and Expenditure Survey have shown that persons without a usual source of care tend not to have an established physician relationship because they do not often get sick (Kasper and Barrish, 1982).

The importance of these two explanations of HMO choice to the Medicare population and to the marketing of Medicare alternatives lies in the proposition that self-selection of persons into health care delivery alternatives results in HMO's enrolling persons whose health care use and cost patterns may not be representative of the general population. To the extent that HMO marketing staff embrace the perceived vulnerability hypothesis, they are less likely to aggressively market their plan. Marketing strategies may be tempered by the desire of the HMO not to attract beneficiaries who are "sicker" on the average than their peers. Making the plan appear too attractive to sicker beneficiaries may result in beneficiaries enrolling whose expected use, and thus cost to the HMO, will be greater than the capitation revenue received from Medicare based on actuarial assumptions reflected in the AAPCC reimbursement formula. HMO administrators who perceive the Medicare market as inherently risky may thus be reluctant to market aggressively, fearing the possiblity of adverse selection.

Alternatively, an HMO may not fear adverse selection and may aggressively market its benefit package in an attempt to identify those beneficiaries who have less established physician ties and who are more likely to have fewer serious health problems prior to enrolling (i.e., to achieve a favorable selection bias).

The tension resulting from an HMO's concern over biased selection versus the HMO's desire to enroll beneficiaries is key to understanding Medicare marketing in a competitive environment. Evidence to date from the Medicare capitation demonstrations shows that HMO enrollees tend to have significantly lower levels of Medicare reimbursements prior to joining the plan when compared with beneficiaries choosing to remain in a fee-for-service system, indicative of plans experiencing favorable selection (Eggers and Prihoda, 1982).

To fully understand the relevance of biased selection in enrolling Medicare beneficiaries in the Twin Cities, it is important to recognize that HCFA permitted all four of the Twin Cities demonstrations to offer high-option and low-option benefit plans and to use health screening as a condition of enrollment. Beneficiaries who applied for the high-option plan and who failed the health screen could only enroll in the low-option plan during a yearly 1-month open enrollment period. Beneficiaries who failed the screen during any other time of the year were not allowed to apply until the next open enrollment. In 1984, HCFA required the demonstrations to change this policy. Persons who failed the high-option health screen could now enroll in the low-option alternative at anytime of the year, and persons could enroll directly in the low-option alternative without submitting to a health screen. HCFA does not allow health screening in TEFRA risk-based Medicare contracting and in operational Medicare prepaid demonstrations.

At this juncture in the research, it is not known to what extent beneficiaries decide to join a specific HMO based on criteria that are directly related to understanding or accepting principles of prepaid contracting. For example, receiving all of Part A and Part B Medicare covered services from an HMO for a premium paid in advance to the HMO in addition to the standard Medicare Part B premium. Alternatively beneficiaries may choose an HMO based on the strength of a plan's marketing efforts that may or may not emphasize plan attributes associated with prepayment concepts.

Neither is it known which cognitive search strategy beneficiaries use in selecting alternatives. A compensatory model of consumer choice assumes that beneficiaries will weigh plan alternatives on a variety of health care insurance and delivery system attributes deemed important. The beneficiary will find that each plan will be deficient in certain attributes and superior in others. On balance, either one plan will emerge as desirable and worthy of purchase or the

beneficiary will remain in the fee-for-service system. Alternatively, if beneficiaries use noncompensatory search strategies, they may begin their decisionmaking by evaluating all alternatives based on a single highly valued attribute (e.g., access to a particular primary care physician) and reject all alternatives that do not fulfill this minimum requirement (LaTour, 1980).

An effective marketing strategy not only informs and convinces persons to enroll but keeps them enrolled. If a beneficiary remains satisfied with an HMO, enrollment should continue indefinitely. A dissatisfied beneficiary has three options—remain in the HMO although dissatisfied, disenroll from the HMO and join another plan, or return to fee-for-service Medicare coverage. It is assumed that the dissatisfied beneficiary will choose another HMO only if a positive attitude has been formed to the HMO concept. If the decision to join had been made exclusively on the marketing effectiveness and reputation of a specific plan, then a return to the fee-for-service system would be predicted.

This report addresses the following questions:

- What is the relationship between beneficiary social and demographic characteristics and plan enrollment? Do the four Twin Cities' HMO's attract different segments of the Twin Cities' Medicare population?
- What are the effects of private health insurance, usual source of medical care, satisfaction with this usual source of medical care, and self-reported health status on motivating Medicare beneficiaries to consider the HMO alternative?
- How did the HMO's promote the Medicare alternative? How were Medicare beneficiaries informed about the Medicare demonstration and to what extent did beneficiaries comparison shop in reaching an enrollment decision?
- Why did Medicare beneficiaries choose to enroll in an HMO or alternatively choose to remain in the fee-for-service system?
- How satisfied are Medicare beneficiaries with the HMO alternative?

The marketing environment

The analysis focuses on the experience of four HMO's in the Minneapolis-St. Paul metropolitan area that participated in Medicare capitation demonstration. Advocates of market competition as a means of containing health care costs repeatedly point to the Twin Cities as a model of the growth of HMO's as an alternative to the fee-for-service system (Iglehart, 1984; Hospitals, 1983; Haines, 1983). Of the five market areas included in the demonstration, the Twin Cities afforded the only opportunity to study a situation where beneficiaries could choose between more than one Medicare HMO alternative. In December 1984, in the 11 Minnesota counties in which the risk-based Medicare HMO alternative is marketed, total enrollment of aged and disabled Medicare beneficiaries in risk-based Medicare alternatives is approximately 20 percent of the Medicare population. As of June 1984, 36 percent of the Twin Cities' population were enrolled in HMO's (Iglehart, 1984).

The four Twin Cities HMO's are:

- *SHARE Health Plan* was jointly established in 1973 by Samaritan Hospital, St. Paul, Minn., and a railroad workers benefit fund. It became federally qualified in 1977. Originally a staff model, SHARE has expanded to include a group network and is now also operating in Iowa and Illinois. As of December 1984, SHARE had approximately 115,000 members, of whom approximately 27 percent (31,100) were Medicare enrollees. Over the course of the demonstration, SHARE has had an average monthly increase of 638 Medicare enrollees. SHARE was the only Twin Cities demonstration to have a cost contract with the Medicare program prior to the demonstration and was able to roll-over approximately 2,200 beneficiaries from this contract.
- *MedCenter Health Plan* was established in 1972 by the St. Louis Park Medical Center (SLPMC), a prestigious multispecialty group practice in suburban Minneapolis. SLPMC developed MedCenter as a prepaid alternative for persons using the group practice on a fee-for-service basis. Because of its reputation for high quality medical care, observers of HMO's attribute the SLPMC's decision to form an HMO as a major impetus to the general growth of HMO's in the Twin Cities (Anderson et al., 1983). MedCenter has grown to include a group network with clinic sites in Minneapolis and St. Paul. In summer 1983, MedCenter merged with Nicollet-Eitel Health Plan to form MedCenters, Inc. In January 1983, MedCenter had approximately 108,000 members, of whom 2.2 percent (2,354) were Medicare beneficiaries. As of December 1984, MedCenters had approximately 188,000 members, of whom 4.6 percent (8,626) were Medicare enrollees. The combined average monthly increase of MedCenter and Nicollet-Eitel Health Plans (i.e., MedCenters) has been 195 Medicare beneficiaries.
- *Nicollet-Eitel Health Plan* was jointly established by the Nicollet Clinic and Eitel Hospital in 1972. Both the clinic and the hospital are located in downtown Minneapolis. A group model, the Plan has since added three suburban Minneapolis clinic sites and has merged with MedCenter Health Plan. In January 1983, prior to the merger, Nicollet-Eitel had approximately 29,000 members, of whom 3.8 percent (1,088) were Medicare beneficiaries.
- *HMO Minnesota* was established by Blue Cross Blue Shield of Minnesota in 1974. A network model, the plan contracts with physician groups, referred to as "health care organizations" that are placed at risk. As of December 1984, HMO Minnesota had approximately 69,000 members, of whom 9.1 percent (6,318) were Medicare enrollees.

The participation of these four HMO's in the demonstration was coordinated by InterStudy, a Twin Cities based health policy research and development organization under contract to the Health Care Financing Administration.

InterStudy assisted the four plans in negotiating contractual arrangements with the Medicare program, and it conducted a public information campaign to inform beneficiaries about the four options prior to the first general open enrollment period of MedCenter, Nicollet-Eitel, and HMO Minnesota in May 1981. While SHARE began enrolling in November 1980, it also participated in the May 1981 open enrollment period.

Not all Twin Cities HMO's chose to participate in this demonstration. Two of the largest HMO's—Group Health Plan, Inc., with approximately 200,000 members, and Physicians Health Plan (PHP), a Minneapolis-based IPA (independent practice association) with 106,000 enrollees—initially chose not to participate as did Coordinated Health Care, a small network HMO with approximately 6,000 members.

Up until mid-1983, Physicians Health Plan offered Medicare supplementary coverage that did not lock beneficiaries into receiving their care from a PHP physician. PHP now has a group practice prepayment plan contract with HCFA. In the fall of 1983, Group Health Plan, Inc., entered into a risk-based demonstration contract with HCFA and began enrolling Medicare beneficiaries in April 1984. As of December 1984, Group Health Plan had 4,535 Medicare enrollees.

Since the beginning of the demonstration, two new Medicare prepaid health plans have entered the Twin Cities market. In September 1984, Senior Health Plan, Inc., a consortium of the Wilder Foundation, Health Central, Inc., and St. Paul-Ramsey Medical Center began operating as a risk-based Medicare demonstration. By December 1984, Senior Health Plan had approximately 3,500 enrollees. In January 1985, Medicare Partners, Inc.[1], a social health maintenance organization Medicare demonstration began operating. In contrast with the other prepaid Medicare alternatives in the Twin Cities, Medicare Partners offers long-term care benefits that exceed Medicare's limited long-term care coverage and deliberately aims to enroll a proportion of beneficiaries who are functionally impaired and at risk of institutionalization. Medicare Partners projects an enrollment of 4,000 Medicare beneficiaries.

In addition to these HMO-related alternatives, at least 16 insurers offer Medicare supplemental coverage in Minnesota (State of Minnesota, 1982). In contrast with the demonstration HMO's, the premiums for these Medicare supplemental policies vary based on a person's age or age and sex. For example, for males 65-69 years of age, the 1982 premium for comprehensive Medicare supplemental policies ranged from $34.59 to $149.33 per month. These rates are between approximately 25 percent and 538 percent more than the highest premium charged by the four demonstration HMO's. Coverage under these Medicare supplemental policies is less than that under the demonstration HMO's. Premiums and benefit packages for the four initial demonstrations are shown in Appendix 1.

The demonstration HMO's have competed for membership not only against each other and the Medicare supplemental insurers but also with alternative fee-for-service medical care programs tailored to the needs of the elderly. The most prominent of these programs has been sponsored by the Minneapolis Age and Opportunity (MAO) Center in conjunction with Abbott-Northwestern Hospital. By enrolling in this program, low income Medicare beneficiaries received all their ambulatory services through the MAO outpatient clinic. Clinic physicians accept Medicare assignment. Beneficiaries are not charged physician coinsurance, if they receive hospital care at Abbott-Northwestern. More than 7,000 Medicare beneficiaries participated in this program, which also offered additional benefits such as reduced costs for prescription drugs.

The Minnesota Senior Federation (MSF), a statewide seniors organization with over 100,000 members, also offered a "no-cost" comprehensive health program through Twin Cities area hospitals similar to MAO-Abbott-Northwestern. MSF estimates that participation in this program ranged between 6,000 and 10,000 beneficiaries at the time the demonstration began. To participate, seniors had to pay dues to the MSF and they had to have a maximum income ranging from $5,000 to $8,750 for a single person and $8,000 to $10,000 for couples, depending on the participating hospital. The MSF also marketed a Medicare supplemental policy to about 10,000 beneficiaries and offered members access to dental, optometric, perscription drug, podiatric, and chiropractic services at reduced rates.

Because of its leadership position in representing the interests of Minnesota's seniors, the demonstration HMO's viewed securing MSF support as a marketing asset. During the course of the demonstration, MSF endorsed all the demonstration HMO's, although all four plans were never endorsed at the same time.

Study design and method

Study results are based primarily on a survey of approximately 1,800 Medicare beneficiaries residing in the Twin Cities metropolitan area. The survey was designed to permit comparisons of enrollees in each of the four Medicare demonstration HMO's with an areawide statistically balanced nonenrollee comparison group and to permit comparisons between enrollees in each of the four plans. Survey data are supplemented by information on plan marketing activities obtained from site visits and InterStudy annual reports.

Research Triangle Institute conducted the survey for the Health Care Financing Administration in October-November 1982. For the HMO enrollee samples, respondent eligibility was restricted to beneficiaries who were at least 65 years of age as of March 31, 1981, enrolled in the HMO at least 1 calendar year after their 65th birthday but by March 31, 1982, and resided in the HMO's service area as defined by zip codes. The nonenrollee sampling frame required that beneficiaries be at least 65 years of age by March 31, 1981, and that they reside in the HMO's service area as defined by zip codes. Further restrictions on survey eligibility implemented in the field required that the respondent not be institutionalized and still reside in the defined HMO market area.

The sampling design used for the survey was a one-stage stratified probability sample of the four Medicare HMO beneficiary populations and the one nonenrollee Medicare population used for comparison purposes. For each of the four HMO enrollee populations, the sample was first equally allocated, to the extent possible, to 10 age-by-sex groups

[1]Medicare Partners, Inc. is now Seniors Plus.

(i.e., males and females in the age groups 65-69, 70-74, 75-79, 80-84, and 85 years and over). The rationale for this equal allocation across age-sex groups was to assure that sufficient numbers of older beneficiaries were included in the survey to afford the potential for separate analyses for these groups.

The sample was further stratified using the HMO penetration rate within each zip code area. The sample was proportionally allocated to homogeneous HMO penetration rate strata. This stratification reflected the fact that the HMO's did not draw enrollees from the same zip code areas in the same proportions throughout the Twin Cities metropolitan area. The HMO penetration rate for each Twin Cities zip code in the seven-county demonstration service area was calculated by dividing the number of Medicare enrollees in that zip code area by the total number of Medicare eligible seniors residing in that area (i.e., enrollees and nonenrollees).

The survey design called for 1,800 personal interviews. Because of the desire to make descriptive statistical estimates for each of the five populations with approximately equal precision and to compare HMO populations with their nonenrollee population with approximately equal precision, sample sizes of approximately 300 were allocated to each HMO and those of 600 were allocated to each nonenrollee comparison group. Interviews were completed with 1,243 enrollees and 525 nonenrollees, and the response rates were 96 percent and 94 percent, respectively, for enrollees and nonenrollees.

The larger sample size assigned to the nonenrollee comparison group reflects the added complexity of not only producing population estimates from sample totals but also producing balanced or standardized comparisons between enrollees and nonenrollees that are free of the confounding effects of certain variables. These variables were age, sex, and HMO penetration rate (i.e., the zip code distribution of HMO enrollees). The standardizing procedure used for balanced comparisons between HMO and non-HMO groups involved a reweighting of nonenrollee respondents. This reweighting resulted in the nonenrollee estimated population distribution being identical to the HMO estimated population distribution by age, sex, and HMO penetration rate. In our analyses, the nonenrollee group is standardized separately for each of the four demonstration HMO's. The analysis presents standardized nonenrollee population estimates.

In reviewing survey results, the reader should recognize that survey respondents are early joiners. Had we surveyed persons who joined later in the demonstration, different response patterns may have emerged.

Because the survey was conducted between 6 and 18 months after beneficiaries enrolled, recall may be a consideration in the reliability of findings. However, because purchasing an alternative to Medicare through an ostensibly time-limited demonstration is a serious decision, there is no reason to believe that the particulars of how this decision was made were forgotten or biased.

The data presented are descriptive (i.e., proportions and means) and are used to compare enrollees with nonenrollees and enrollees across the four plans. To assist in interpreting data, a standard error table and instructions for its use appears in Appendix 2. A fuller description of survey methodology and the estimation of sampling errors (Bryan, Bergsten, and Weeks, 1983) can be obtained from the senior author.

Results

Beneficiary demographic characteristics

Effective marketing recognizes that consumers of a given product are not homogeneous and selling strategies can be improved by differentiating the market into segments most likely to find the goods or service appealing. Marketing an HMO or CMP should be no exception to this principle. On the basis of the geographical distribution of Medicare beneficiaries in relation to the location of affiliated primary care providers and the demographic characteristics of beneficiaries (e.g., income and education, living alone or married, participation in senior citizen organizations), HMO's may be able to segment the Medicare market in ways that improve marketing efficiency (i.e., number of dollars expended per enrollment).

Table 1 presents data on beneficiary characteristics assumed to be important in defining market segments along demographic lines. The percent of Nicollet-Eitel enrollees who are living alone is considerably greater than that of enrollees in the other plans. Of those beneficiaries who had someone living with them, generally a spouse, 61.7 percent of the SHARE respondents had someone else join SHARE when they did. By contrast, 41.8 percent of the HMO Minnesota enrollees had another household member join at the same time they enrolled. These data indicate that prepaid health plans stand roughly a 50-percent chance of enrolling at least two Medicare beneficiaries from each household where someone was living with the enrolled beneficiary.

MedCenter and HMO Minnesota enrollees were more highly educated than beneficiaries who enrolled in either Nicollet-Eitel or SHARE. In comparison with MedCenter, where 16.4 percent of the enrollees had 8 years of education or less, 32.5 percent of the SHARE enrollees had little formal education. Only 17.0 percent of SHARE enrollees attended college.

With the exception of SHARE enrollees, fewer of whom had incomes over $20,000 than the nonenrollees to whom they were compared, there appear to be little differences in income between enrollees and nonenrollees. Although demonstrations chose not to enroll Medicare beneficiaries who were also receiving Medicaid assistance, survey results show that 2 percent of enrollees reported being covered by Medicaid at the time of enrolling, and that 4.1 percent of the fee-for-service Medicare population are estimated to be dually eligible.

Differences in income between enrollees do exist, however. The percent of Nicollet-Eitel enrollees with incomes under $5,000 was much greater than that of MedCenter, HMO Minnesota, and SHARE enrollees. Although the difference in the percent of low income enrollees was similar for SHARE, MedCenter, and HMO Minnesota, the percent of higher income enrollees was approximately the same for HMO Minnesota and MedCenter, three times greater for SHARE, and twice that of Nicollet-Eitel.

Table 1

Percent of Medicare beneficiaries enrolled and not enrolled in health maintenance organizations (HMO's), by plan and selected sociodemographic characteristics of beneficiaries

Characteristic	Plan							
	SHARE		MedCenter		Nicollet-Eitel		HMO Minnesota	
	Enrolled	Not enrolled	Enrolled	Not enrolled	Enrolled	Not enrolled	Enrolled	Not enrolled
	Percent							
Married	66.9	58.1	62.5	61.9	45.4	48.9	57.0	56.9
Respondents living with someone who had household member join when they did	61.7	—	58.7	—	51.8	—	41.8	—
Education:								
8 years or less	32.5	34.0	16.4	24.1	27.0	26.5	21.2	30.1
Some college	17.0	25.9	36.2	28.0	26.4	28.8	30.6	25.4
Income:								
Less than $5,000	9.0	10.8	6.4	8.8	16.2	15.0	8.1	11.1
$20,000 or more	6.7	15.0	21.7	23.0	10.9	15.4	17.1	19.6
Usual transportation:								
Drive	62.9	46.3	65.2	51.5	43.7	37.1	60.7	46.9
Public bus or walk	12.9	17.0	8.9	15.7	31.8	24.6	15.6	20.7
Friend or relative	22.5	34.4	24.4	28.7	21.4	35.2	22.2	29.3

Beneficiaries' usual source of transportation reflects both the geographic location of HMO services and beneficiary mobility. With the exception of Nicollet-Eitel, enrollees in the other plans were much more likely to drive than the nonenrollees were to whom they were compared. Nicollet-Eitel enrollees were far more likely than enrollees of other plans to get around by bus or by walking. The percent of Nicollet-Eitel enrollees who rode the bus or walked is not different from that of the nonenrollees to whom they were compared.

Controlling for age, sex, and geographical distribution of enrollees, plan enrollees appeared to be more independent in transportation than the nonenrollees to whom they were compared. Even though the percent of plan enrollees who depended on friends or relatives for transportation did not appear to differ, the percent of Nicollet-Eitel and SHARE enrollees who were dependent on others was considerably less than that of their nonenrollee comparison groups. The source of this mobility differs by plan: For enrollees of SHARE, MedCenter, and HMO Minnesota driving predominated. Nicollet-Eitel enrollees relied more heavily on public transportation and walking.

Motivators for change

Beneficiaries will respond to HMO marketing efforts only to the extent that they are dissatisfied with their present levels of health insurance coverage, with the costs of insurance coverage or medical care, or with the perceived quality of care of their current health care provider.

Private health insurance

Table 2 presents data on health insurance and health care delivery attributes of enrollees and nonenrollees. Prior to joining, enrollees of all four plans reported having less private health insurance than nonenrollees. Private insurance refers not only to Medicare supplemental insurance but also includes major medical, indemnity, "dread disease," and any other health insurance coverage purchased by the respondent either individually or through a group (e.g., employer, union, or fraternal order) or under which the respondent might be covered through a spouse's insurance. The percent of enrollees with private health insurance coverage prior to joining was least (57.8 percent) at SHARE, and greatest (71.6 percent) at HMO Minnesota.

After joining, enrollees appeared willing to relinquish private health insurance coverage although the extent to which this coverage was dropped varied across plans. By the time of the interviews, conducted 6-18 months after enrollment, beneficiaries who retained private health insurance ranged from 35.3 percent among Nicollet-Eitel enrollees to 10.7 percent among MedCenter enrollees. The beneficiaries dominant reason for giving up their private policies was the perceived adequacy of HMO coverage. It is important to note that neither HCFA nor the plans, with the exception of HMO Minnesota, assured the beneficiaries that they would be able to regain supplementary Medicare coverage should the demonstration end.

Usual source of care

The lack of integration hypothesis of HMO choice assumes that HMO joiners are more likely than nonenrollees not to have a usual source of medical care. In contrast with beneficiaries without private supplementary insurance, beneficiaries without a usual source of care represent a relatively small market segment in the Twin Cities. Less than 10 percent of all Twin Cities Medicare beneficiaries reported not having a usual source of care, a finding consistent with

national estimates from the National Medical Care Expenditure Survey in which it was found that 11.4 percent of persons over age 65 did not have a usual source of medical care (Kasper and Barrish, 1982). As measured by the percent of beneficiaries with a usual source of care who saw the same medical person, continuity of care appears high among both enrollees and nonenrollees—approximately 90 percent. However, the importance that enrollees attach to seeing the same medical person appears to be less than that of nonenrollees at all four sites.

Although not having a usual source of care may be a factor in considering an HMO for about 10 percent of the beneficiary population, the extent to which persons who enroll in HMO's do not have to give up their usual source of care to join appears to be a much more critical factor in formulating HMO marketing strategies. The data indicate that in the MedCenter, Nicollet-Eitel, and HMO Minnesota demonstrations, early Medicare enrollment was concentrated among beneficiaries who used HMO affiliated physicians on a fee-for-service basis prior to joining. In marked contrast, 83 percent of SHARE enrollees reported having had no previous association with a SHARE provider.

Table 3 compares enrollees and nonenrollees along several dimensions of satisfaction with their usual source of care prior to joining an HMO. The enrollee data in this table are for those beneficiaries whose usual source of care was different from that of the plan they joined. These beneficiaries are referred to as fee-for-service "switchers". Beneficiaries who were using the plan on a fee-for-service basis prior to joining were not asked about their satisfaction with the HMO prior to enrolling. These beneficiaries are referred to as fee-for-service "rollovers."

A relatively small percentage of enrollees and nonenrollees report overall dissatisfaction with their usual source of care prior to enrollment. For enrollees, dissatisfaction with the prior usual source of care was greatest (13.5 percent) among beneficiaries who joined Nicollet-Eitel and least (6.6 percent) among MedCenter enrollees. When compared with the nonenrollee comparison groups, however, overall dissatisfaction with the prior usual source of care was considerably greater among persons who chose to enroll in HMO's than among beneficiaries who remained in the fee-for-service system.

Three dimensions of satisfaction with the usual source of care prior to enrollment were examined during the survey: perceived quality of care, access, and cost. The data indicate that across these dimensions of satisfaction and regardless of plan, enrollees were generally more dissatisfied than nonenrollees with attributes of the fee-for-service health care delivery system. Though dissatisfaction levels with perceived

Table 2

Percent of Medicare beneficiaries enrolled and not enrolled in health maintenance organizations (HMO's), by plan and health care delivery characteristics

Characteristic	Plan							
	SHARE		MedCenter		Nicollet-Eitel		HMO Minnesota	
	Enrolled	Not enrolled	Enrolled	Not enrolled	Enrolled	Not enrolled	Enrolled	Not enrolled
	Percent							
Respondents having private insurance before enrollment	57.8	—	68.6	—	58.5	—	71.6	—
Respondents covered by private insurance at time of survey	15.6	80.9	10.7	79.1	35.3	73.6	13.2	80.0
Respondents citing HMO coverage as primary reason for giving up private insurance	62.7	—	66.7	—	55.5	—	69.8	—
Respondents with usual source of care (enrollee response refers to prior to enrollment)	87.0	93.1	94.0	92.8	95.0	91.1	93.9	92.9
Respondents whose usual source of care was that HMO prior to enrollment	16.8	—	67.4	—	74.0	—	64.5	—
Respondents with usual source of care who usually see the same medical person	88.3	93.7	96.2	95.2	91.6	93.1	95.6	96.2
Respondents with usual source of care for whom it is very important to see same medical person	66.0	73.9	56.2	71.7	61.1	79.6	71.4	73.7

NOTE: HMO is health maintenance organization.

quality of care and access were relatively low (except for office waiting time, with less than 15 percent reporting poor or fair), substantial dissatisfaction existed in the area of cost.

Enrollees, regardless of plan, reported much greater dissatisfaction with paperwork associated with their prior usual source of care than beneficiaries with a usual source of cares who remained in a fee-for-service system did. SHARE and Nicollet-Eitel enrollees reported the greatest paperwork burden. SHARE and Nicollet-Eitel beneficiaries were also much more likely than fee-for-service comparison groups and MedCenter and HMO Minnesota enrollees to indicate dissatisfaction with fees charged. Overall, enrollees appeared to have experienced fewer problems with the fee-for-service Medicare program than nonenrollees did.

Health status and social participation

Table 4 provides data on the self-reported health status and social participation of enrollees and nonenrollees. The perceived vulnerability hypothesis argues that HMO enrollees will be less healthy than their peers. The lack of integration

Table 3

Percent of Medicare beneficiaries enrolled and not enrolled in health maintenance organizations (HMO's), by plan and degree of satisfaction with usual source of care

	Plan							
	SHARE		MedCenter		Nicollet-Eitel		HMO Minnesota	
Level of satisfaction	Enrolled	Not enrolled	Enrolled	Not enrolled	Enrolled	Not enrolled	Enrolled	Not enrolled
	Percent							
Overall, very satisfied	62.8	76.9	78.1	77.5	60.3	83.4	68.7	79.6
Overall, dissatisfied	9.1	1.5	6.6	1.7	13.5	2.2	8.1	1.5
Perceived quality of care (poor-fair):								
Professional competence	9.6	1.5	8.9	4.3	8.9	3.1	5.1	2.7
Physician's willingness to discuss problems	15.5	9.8	11.1	5.9	12.9	6.0	15.4	5.9
Courtesy of staff	3.6	3.5	6.1	2.0	7.4	1.3	7.1	2.7
Access (poor-fair):								
Availability of emergency care	5.4	1.7	6.4	3.3	6.7	1.9	1.7	2.4
Waiting time after arrival	30.8	11.1	10.4	13.4	18.7	11.7	27.3	12.9
Ease in getting appointment	12.8	7.9	4.8	8.5	6.1	4.8	8.4	5.5
Problems with Medicare	11.5	21.8	24.8	23.7	8.5	21.2	12.6	21.8
Fees charged (poor-fair)	36.9	15.7	25.8	15.6	40.9	15.2	28.9	13.3
Amount of paperwork (poor-fair)	53.9	31.8	28.3	38.0	52.0	37.7	40.3	36.2

Table 4

Percent of Medicare beneficiaries enrolled and not enrolled in health maintenance organizations (HMO's), by plan and perceived health status and social participation

	Plan							
	SHARE		MedCenter		Nicollet-Eitel		HMO Minnesota	
Health status and social participation	Enrolled	Not enrolled	Enrolled	Not enrolled	Enrolled	Not enrolled	Enrolled	Not enrolled
	Percent							
Health status (excellent or good)	86.5	74.3	83.2	76.7	81.0	72.6	87.1	73.4
Health status much better or better than peers	79.7	69.2	69.6	66.8	72.4	62.6	76.6	66.8
Respondents reporting heart trouble	12.0	19.7	21.0	21.2	16.4	22.8	11.2	24.8
Respondents reporting diabetes	3.5	9.6	6.8	8.5	4.1	12.6	2.1	8.4
Respondents reporting cancer or leukemia	2.8	6.8	4.5	7.0	3.3	5.9	2.8	7.6
Respondents belonging to or taking part in seniors organizations	43.3	31.2	44.6	31.8	41.8	24.5	47.7	31.2
Respondents paying dues to Minnesota Seniors Federation	45.6	31.6	61.4	27.8	72.4	26.3	60.5	33.3

hypothesis argues that enrollees, assuming they have not been denied access to medical care for nonhealth related reasons (e.g., financial barrier), will be healthier than average.

Enrollees reported themselves to be in better health than the nonenrollees to whom they were compared. Approximately 87 percent of SHARE and HMO Minnesota enrollees reported themselves in excellent or good health, compared with 74 percent of nonenrollees. Data from the National Medical Care Utilization and Expenditure Survey indicate that nationally 63 percent of Medicare beneficiaries over 65 years of age reported themselves to be in excellent or good health (Schlenger, Wadman, and Corder, 1983).

In response to an inventory of medical conditions, with the exception of MedCenter, enrollees in the other three plans were far less likely to report having a serious medical condition, such as heart disease, cancer, or diabetes. Such conditions would likely be associated with higher than average health care use and costs. HMO enrollees also appeared to be more socially active than nonenrollees, as evidenced by their participation in seniors organizations and paying dues to the Minnesota Seniors Federation.

Health plan marketing

Before beneficiaries can seriously consider alternatives to standard Medicare coverage, they must first become aware that alternatives exist. Information distinguishing one alternative from another makes weighing differing attributes among these alternatives possible. Before presenting survey data on how beneficiaries learned about the demonstration and the modes of advertising that were most influential in the enrollment decision, it is useful to describe plan marketing activities during the period prior to the survey, fall 1980 through December 1982 (Owen, 1983 and InterStudy, 1984).

Among the HMO demonstrations, SHARE was the most aggressive marketer. Having had a Medicare cost-reimbursement contract, SHARE was able to offer the risk-based option to cost-contract enrollees prior to the first general open enrollment period in May 1981. It was the first HMO to begin marketing, and throughout the study period SHARE marketed with greater frequency and intensity than the other demonstrations.

SHARE's marketing plan relied on two principles: positioning itself as an organization that was accessible and responsive to the enrollee like a good neighbor or trusted friend while combining this image with price promotion strategies that made the plan economically attractive. To accomplish the first objective, SHARE described itself in marketing literature as "The Plan That Cares." During the period directly prior to the first open enrollment period, SHARE initiated a "SHARE with a friend" campaign, during which time existing members received a $5 rebate on prescription drugs or monthly premium if through their referral a relative or friend joined. During this same period, SHARE heavily advertised a premium decrease of 20 percent, which made the plan the least expensive Medicare alternative at that time.

Coupled with mass mailings to a total of 170,000 seniors, SHARE also initiated "get acquainted" campaigns on three occasions. Beneficiaries who enrolled in the plan during this campaign received three months of plan benefits without having to pay any premium. SHARE implemented these general marketing strategies by advertising on television, radio, billboards (i.e., bus advertising), and in newspapers; conducting numerous presentations to community groups; and disseminating plan literature by using innovative techniques such as placing marketing staff in bank lobbies to distribute literature and arranging for banks to mail SHARE brochures as accompaniments to social security check deposit receipts.

In marked contrast with SHARE were the extremely limited marketing activities of HMO Minnesota. HMO Minnesota's marketing plan was strongly influenced by the demonstration's sponsorship by Blue Cross Blue Shield of Minnesota. Of the four HMO demonstrations, HMO Minnesota showed the greatest evidence of the potential tension between HMO marketing and management's concern about attracting Medicare beneficiaries who are high users of medical services (i.e., adverse selection).

Blue Cross Blue Shield of Minnesota had its own underwriting department, and it stringently applied health screening guidelines for its Medicare high-option plan during the study period. For example, during the first year of operations, HMO Minnesota screened 1,476 Medicare applicants for its high-option plan; 51.8 percent (765) of whom were denied enrollment because of failing the screen. In addition, HMO Minnesota was the only HMO to set its low-option premium higher than its high–option premium so as to discourage application for the low-option plan during the 1–month yearly open enrollment period. Therefore, if Medicare beneficiaries failed to pass the high-option screen but still wanted to enroll in the low-option plan, they would have to pay a low-option premium that was approximately $9 more than the premium of the nearest competitor's low-option plan. In 1984, HCFA informed the demonstrations that high-option plan premiums could not be lower than premiums for low-option plans.

This concern with adverse selection led HMO Minnesota to be very cautious in marketing. Up until December 1982, HMO Minnesota's marketing consisted of infrequent newspaper ads, community group presentations, and posters in physician offices. In early 1983, after the study period, HMO Minnesota began a more aggressive media campaign that included the extensive use of radio advertising, using a testimonial strategy that relied on the endorsement of a well-respected radio personality. Being an IPA, these commercials emphasized the ability to retain your physician and the fact that HMO Minnesota's premium had been reduced and was now lower than SHARE's. In 1984, HMO Minnesota reduced its low-option premium $10, and became the lowest priced high-option plan available to Medicare beneficiaries in the Twin Cities.

The extent and intensity of MedCenter's marketing efforts fall somewhere between that of SHARE and HMO Minnesota. Like SHARE, MedCenter had a clear marketing strategy, positioning itself as the "high-quality" plan with a "stay–well" philosophy. This marketing strategy was, however, tempered by a concern about adverse selection.

MedCenter's reputation for high quality care derived from its affiliation with the St. Louis Park Medical Center (SLPMC). Many SLPMC physicians had served Medicare

beneficiaries on a fee-for-service basis, and the plan had offered a Medicare "wraparound" to members of employee groups who had reached age 65. Because of SLPMC's nationally regarded excellence in specialty care, MedCenter was concerned that extensively advertising the link between the demonstration and SLPMC might result in adverse selection.

Even though MedCenter was the only demonstration HMO to develop an array of preventive geriatric medicine programs and to organize a senior health services department, the plan was cautious in its initial marketing efforts, relying primarily on outreach to seniors groups and limited mailings. In early 1982, MedCenter increased the scope and intensity of its efforts by adding radio spots, newspaper ads, and significantly increasing the frequency of presentations. One of the newspapers ads during this period was jointly produced with Nicollet-Eitel, whose service area was distinct enough from MedCenter that the plans did not view themselves as direct competitors.

Nicollet-Eitel focused its early marketing efforts on making senior citizen presentations at senior citizen centers and senior citizen high rise apartments. An initial mailing was made to 5,000 persons who used the Nicollet Clinic on a fee-for-service basis. Marketing activity later in the study period also targeted existing Nicollet-Eitel patients. Nicollet-Eitel placed only one newspaper ad during the study period (the one done jointly with MedCenter).

In addition to each HMO's marketing activities, InterStudy conducted a public education campaign in behalf of the entire Medicare capitation demonstration prior to and during the first open enrollment period in May 1981. InterStudy did not market the relative merits of any particular HMO and served as an information broker only. InterStudy's activities included making presentations to groups of seniors and to aging services agencies, staffing an information telephone hotline, mailing brochures about the demonstration in response to information requests, and distributing public service announcements to radio and television stations.

Beneficiary awareness

Survey data indicate that 57.6 percent of all nonenrollees reported hearing about the special Medicare plan offered by the demonstration HMO's in the Twin Cities. Nonenrollees who recalled hearing about the Medicare demonstration were of higher income and education levels and participated more in senior citizen organizations than beneficiaries who reported not hearing about the program. Among persons recalling the demonstration, 21 percent had incomes over $20,000, 34 percent had some college, and 33 percent took part in a senior citizen organization. Hearing about the program was also associated with being married and having private health insurance coverage.

Of those who had not heard about the program, only 12 percent had incomes over $20,000, 18 percent had some college, and 24 percent took part in a senior citizen organization. Overall, 47.3 percent of nonenrollees had heard about SHARE, and 32.7 percent had heard about HMO Minnesota. Fewer beneficiaries heard about MedCenter or Nicollet-Eitel—11.5 percent and 2.4 percent, respectively.

Table 5 indicates how enrollees heard about the HMO alternative. For enrollees, unrequested mail, word-of-mouth (i.e., friends and relatives), group presentations (i.e., meetings), and newspaper advertisements and articles were the most frequent sources of information about the demonstrations. Important differences did exist between plans. Over half of SHARE's enrollees reported hearing about the SHARE demonstration from word-of-mouth sources. This compares with approximately one-quarter of the HMO Minnesota enrollees. The survey did not identify whether these word-of-mouth sources were HMO members.

By contrast, approximately one-half of Nicollet-Eitel enrollees learned about the Nicollet-Eitel demonstration from unrequested mail. This compares with roughly 30 percent of the enrollees of the other plans. Relatively few beneficiaries reported hearing about the HMO they joined from a physician or from nonprint mass media (i.e., radio or television). HMO Minnesota was an exception, where approximately 21 percent of enrollees reported hearing about this plan from a physician, reflecting the IPA structure of the plan.

As noted above, two major marketing segments are Medicare beneficiaries who used the HMO on a fee-for-service basis prior to joining (i.e., rollovers) and persons who had to give up their usual source of care in order to join the HMO (i.e., switchers). Table 6 compares how switchers and rollovers heard about the HMO alternative. Recall that SHARE enrollees are dominated by switchers, and rollovers predominate at the other three plans.

For SHARE, word-of-mouth was clearly more influential as a source of information among switchers than among rollovers. This was also the case among Nicollet-Eitel switchers. Physicians played almost no role among SHARE switchers in informing them about SHARE. This finding illustrates a potential difficulty that staff models HMO's may have in enrolling Medicare beneficiaries—that is, these HMO's can only grow by taking patients away from fee-for-service physicians not on the HMO's staff. By contrast, for IPA and group model HMO's with large fee-for-service Medicare practices, physicians represent an important channel for plan marketing. This marketing strategy is illustrated by HMO Minnesota, where approximately 27 percent of the rollovers had heard about the plan from a physician, compared with only 7 percent of beneficiaries who did not use an HMO Minnesota affiliated physician prior to enrolling.

Though exposure to information is essential for beneficiary awareness about HMO's as an alternative to Medicare coverage, the extent to which this information actually influences choice of a particular plan depends on the context, source, and content of information conveyed and on the personal characteristics of the beneficiary. Tables 5 and 6 also indicate the channels of communication that had the greatest influence on HMO enrollment. Word-of-mouth was predominant among SHARE enrollees. Among SHARE enrollees, 43.1 percent reported friends and relatives as their most influential source of information, 22.7 percent reported meetings as most influential, and 14.0 percent reported unrequested mail.

Table 5

Percent of enrollees who heard about health maintenance organizations (HMO's), by plan, media by which they heard about plan they joined, and effectiveness of media type in influencing decision

Media and effectiveness	Plan			
	SHARE	MedCenter	Nicollet-Eitel	HMO Minnesota
	Percent			
Friend or relative:				
Most influential	43.1	24.5	23.8	15.5
Heard about	56.5	32.6	35.0	25.9
Medical person:				
Most influential	1.4	7.1	7.7	15.4
Heard about	4.3	10.0	12.6	20.7
Unrequested mail:				
Most influential	14.0	21.2	34.8	21.5
Heard about	29.6	32.5	51.4	38.3
Newspaper:				
Most influential	6.3	14.6	6.0	15.3
Heard about	23.4	28.5	17.4	36.2
Television:				
Most influential	4.1	2.6	.2	.7
Heard about	21.1	8.0	5.3	7.0
Radio:				
Most influential	0.0	.4	0.0	1.0
Heard about	5.8	2.3	2.2	7.0
Meeting:				
Most influential	22.7	20.4	16.1	19.2
Heard about	33.6	31.6	27.9	34.3
Other or do not know:				
Most influential	8.4	9.2	11.4	11.4

By contrast, Nicollet-Eitel enrollees reported unrequested mail (34.8 percent), followed by friends and relatives (23.8 percent) and meetings (16.1 percent) as their most influential source of information. Table 6 indicates that an important difference existed between Nicollet-Eitel switchers and rollovers concerning the exposure to and influence of unrequested mail. Approximately 61 percent of the rollovers had heard about Nicollet-Eitel from unrequested mail, and 41 percent of them cited this source as most influential. Among switchers, however, only 23.6 percent had heard about this HMO from unrequested mail. This finding may indicate a targeting in the mailing of plan information to rollovers who subsequently joined Nicollet-Eitel. Although HMO Minnesota enrollees also reported unrequested mail most frequently as the most influential channel of plan information, physicians were also a relatively influential source of information (15.4 percent).

Comparing plans

For most Medicare beneficiaries, an actively promoted prepaid alternative to standard Medicare coverage will represent a new concept. For Medicare risk-based contracting under TEFRA to be effective in containing costs, beneficiaries must not only become aware of such alternatives but must also compare available options with their current fee-for-service coverage and decide to enroll in a prepaid health plan.

As shown in Tables 7 and 8 among the enrollees and 58 percent of the nonenrollees who heard about the demonstration, the most frequent method of seeking more information was to call or write. Nicollet-Eitel enrollees were considerably less likely than enrollees of the other plans to seek out additional information prior to joining. The least frequent mode of gaining additional information was having a plan representative visit the beneficiary at home. SHARE and Nicollet-Eitel switchers called or wrote these plans for more information more frequently than rollover enrollees did.

The extent to which enrollees compared their choice with other alternatives is one indicator of market competition among HMO's and with traditional private health insurance. Tables 7 and 8 also show the percent of enrollees who compared plans and seriously considered selecting a different Medicare HMO or private health insurance to supplement Medicare coverage. The percentage of enrollees who compared alternatives prior to joining an HMO ranged from 31.5 percent at HMO Minnesota to 18.4 percent at Nicollet-Eitel.

Enrollees who compared tended to be more highly educated (only 20 percent with 8 years of education or less versus 32 percent among noncomparers), had more private health insurance (69 percent versus 57 percent), and had incomes concentrated in the middle income range of $5,000-$19,999 (80 percent versus 36 percent). Comparers also reported less overall satisfaction with their usual source of care and less involvement in senior citizen organizations than enrollees who did not compare.

Table 6

Percent of enrollee switchers and rollovers, by plan, media by which they heard about the plan they joined, and effectiveness of media type in influencing decision

Media and effectiveness	Plan							
	SHARE		MedCenter		Nicollet-Eitel		HMO Minnesota	
	Switcher	Rollover	Switcher	Rollover	Switcher	Rollover	Switcher	Rollover
	Percent of enrollees							
Friend or relative:								
Most influential	43.6	29.1	26.3	20.9	36.5	20.8	10.5	18.1
Heard about	58.1	38.7	35.4	28.7	50.4	30.7	24.2	27.2
Medical person:								
Most influential	0.6	5.7	6.4	8.0	2.4	8.6	4.2	21.5
Heard about	0.7	16.9	7.6	12.0	5.5	14.5	7.1	26.8
Unrequested mail:								
Most influential	13.8	17.6	15.4	23.0	16.7	40.6	27.4	19.8
Heard about	27.5	33.4	27.6	34.4	23.6	61.0	46.3	35.3
Newspaper:								
Most influential	5.1	8.2	12.2	16.9	7.9	5.0	15.8	11.9
Heard about	23.2	10.4	22.9	11.7	31.3	11.1	36.3	33.6
Television:								
Most influential	4.2	2.5	1.9	3.4	0.8	0.0	1.1	0.6
Heard about	21.8	10.7	6.3	7.5	3.9	5.2	3.9	7.9
Radio:								
Most influential	0.0	0.0	0.6	0.3	0.0	0.0	0.0	1.7
Heard about	6.8	0.2	3.2	0.9	3.1	2.4	5.9	6.7
Meetings:								
Most influential	24.0	28.0	25.6	19.0	23.8	12.5	31.5	15.3
Heard about	32.4	54.9	42.9	28.4	45.7	22.8	47.8	30.1
Other or do not know:								
Most influential	8.7	8.9	11.6	8.5	7.9	12.5	10.5	11.1

NOTE: HMO is health maintenance organization.

Table 7

Percent of Medicare beneficiaries enrolled and not enrolled who actively sought additional information or compared plans, by type of plan and method of seeking information

Method of seeking information	Plan							
	SHARE		MedCenter		Nicollet-Eitel		HMO Minnesota	
	Enrolled	Not enrolled	Enrolled	Not enrolled	Enrolled	Not enrolled	Enrolled	Not enrolled
	Percent							
Called or wrote for information	60.1	37.5	63.3	34.5	43.4	33.1	73.5	43.4
Visited HMO or HMO representative visited home	23.2	2.0	25.9	10.1	15.1	8.6	6.5	3.6
Compared HMO plans	20.0	—	31.4	—	18.4	—	31.5	—

NOTE: HMO is health maintenance organization.

The data indicate that HMO Minnesota, MedCenter, and Nicollet-Eitel switchers tended to compare more often than rollover enrollees did. SHARE switchers and rollovers did less comparing of alternatives, with slightly more rollovers than switchers reporting that they had compared SHARE with other available alternatives.

The matrix presented in Table 9 illustrates the dominance of SHARE as the alternative most seriously considered as an alternative by HMO Minnesota, MedCenter, and Nicollet-Eitel enrollees. By contrast, a relatively small number of SHARE enrollees reported seriously considering the other HMO demonstrations. SHARE respondents did seriously consider a number of private health insurance programs as alternatives to the demonstrations, as indicated by the 47.7 percent "other private insurance" response category.

Table 8

Percent of switchers and rollovers who actively sought additional information or compared plans, by type of plan and method of seeking information

Method of seeking information	Plan							
	SHARE		MedCenter		Nicollet-Eitel		HMO Minnesota	
	Switcher	Rollover	Switcher	Rollover	Switcher	Rollover	Switcher	Rollover
	Percent							
Called or wrote for information	61.0	40.1	62.0	62.9	63.1	37.8	74.2	70.6
Visited HMO or HMO representative visited home	27.8	7.3	34.8	26.2	10.7	17.4	7.2	5.7
Compared HMO plans	18.0	22.5	39.7	27.7	37.6	9.9	39.0	26.6

NOTE: HMO is health maintenance organization.

Table 9

Percent of enrollees by main alternative considered before joining a health maintenance organization (HMO)

Alternative considered	Plan joined			
	SHARE	MedCenter	Nicollet-Eitel	HMO Minnesota
	Percent of enrollees			
SHARE	—	53.7	32.7	48.8
MedCenter	8.4	—	10.4	8.8
Nicollet-Eitel	0.7	3.3	—	3.8
HMO Minnesota	6.1	14.1	7.9	—
Metro Seniors	19.1	1.7	7.6	11.6
Physicians Health Plan	5.7	3.0	25.9	2.9
Blue Cross and Blue Shield	7.9	9.5	1.3	5.0
American Association of Retired Persons	4.2	4.2	3.3	3.6
Other private insurance	47.7	10.3	11.7	15.5

Decision criteria

The data can provide three perspectives on the reasons why Medicare beneficiaries choose a prepaid health plan alternative. These perspectives are: (1) understanding why persons chose the plan they enrolled in; (2) why beneficiaries who considered enrolling in a different plan chose not to enroll in this alternative; (3) why nonenrollees who seriously considered enrolling in an HMO chose to remain in a fee-for-service system. Why didn't these beneficiaries select an HMO alternative?

The small numbers of nonenrollees who seriously considered joining an HMO limits statistical analysis. Nonenrollees who seriously considered joining a demonstration HMO almost exclusively considered joining SHARE; 12.3 percent of nonenrollees reported considering SHARE; 2 percent, HMO Minnesota; and less than 1 percent, MedCenter and Nicollet-Eitel.

Table 10 shows the main reasons enrollees chose a particular plan. Across all plans the most frequently reported reason for joining was good benefits and coverage. Beneficiaries joining SHARE and Nicollet-Eitel cited lower cost as their primary reason for enrolling more frequently than MedCenter or HMO Minnesota enrollees did. By contrast, Nicollet-Eitel enrollees gave their previous experience with the organization as a principal reason for enrolling. Noteworthy is the low percentage of enrollees who reported that they enrolled in the HMO primarily because of dissatisfaction with their previous coverage or primarily because of a plan's reputation for good quality care.

Table 11 lists the reasons enrollees of each of the four plans gave for not selecting their first alternative. Sample sizes are too small to permit a meaningful analysis of why, for example, HMO Minnesota enrollees who seriously considered joining SHARE chose not to join SHARE.

Among the 20 percent of SHARE enrollees who compared SHARE with an alternative, 47 percent cited SHARE's lower costs as the primary reason for not selecting another plan. Another 31 percent of SHARE beneficiaries perceived SHARE's benefits and coverage to be superior to those of the alternatives considered. For MedCenter, geographical access was an important choice factor; 32 percent of the approximately 31 percent of enrollees who compared MedCenter with other plans cited the greater convenience of this plan as the main reason for not selecting an alternative. MedCenter enrollees also indicated a preference for its physicians' and staff over those of the other available alternatives. The response of Nicollet-Eitel enrollees also seems to indicate greater accessibility of this plan when compared with alternatives considered.

Table 10

Percent of enrollees, evaluative criteria, and main reason for joining, by plan

Criteria and reason for joining	Plan			
	SHARE	MedCenter	Nicollet-Eitel	HMO Minnesota
	Percent of enrollees			
Lower cost	19.2	12.3	18.1	14.8
Good program	7.9	6.6	4.8	4.1
Good benefits and coverage	38.6	38.5	26.0	42.1
Good quality of care	1.9	6.1	3.9	3.4
Previous experience with that HMO	2.9	9.1	20.7	6.0
Dissatisfied with former coverage	1.6	1.6	1.6	2.7
Convenient location	5.8	4.9	4.5	0.7
Less paperwork	6.0	6.1	3.5	8.9
Other	16.1	14.8	16.9	17.3

NOTE: HMO is health maintenance organization.

Table 11

Percent of enrollees by primary reason for not selecting alternative considered

Reason	Plan enrolled			
	SHARE	MedCenter	Nicollet-Eitel	HMO Minnesota
	Percent of enrollees			
Liked physician and staff better at present HMO	2.5	17.3	9.4	11.4
Benefits and coverage better at present HMO	30.9	15.3	18.1	19.3
Lower cost at present HMO	47.1	6.6	23.0	19.3
Present HMO more convenient; better access	7.6	32.1	18.4	12.9
Present HMO highly recommended by friend or relative	0.0	0.0	2.0	3.4
Present HMO has no waiting period	0.0	0.0	1.2	2.3
Could not go to physician of choice	2.4	15.9	15.0	11.4
Cost of medical care in present HMO known in advance	0.0	0.6	0.0	1.1
Present HMO guarantees replacing former coverage if demonstration ends	0.0	0.0	0.0	6.8
Other	9.6	12.2	11.6	12.5

NOTE: HMO is health maintenance organization.

Satisfaction with plans

Table 12 shows enrollee satisfaction with the HMO alternative. Overall satisfaction was high, ranging from 85.9 percent to 91.5 percent across plans. Satisfaction along the three dimensions of perceived quality of care, access, and cost was very favorable when compared with satisfaction with the usual source of care prior to enrolling (Table 3). Beneficiaries reported receiving sufficient information about the HMO prior to enrolling and having experienced relatively few problems. Of particular interest are the relatively few enrollees who wanted to see a physician not affiliated with HMO. Both HMO administrators and policy analysts have been concerned that the "lock-in" requirement of HMO membership may result in enrollee dissatisfaction and subsequent disenrollment.

Surprisingly few enrollees reported wanting a service that the HMO did not offer. For those beneficiaries who wanted an additional service, Table 13 shows the additional benefits desired. Many of the benefits suggested (e.g., vision care, routine foot care, prescription drugs) were predictable. The frequent mention of chiropractic services was probably associated with the relative importance of chiropractic services in the Upper Midwest. The infrequent mention of nursing home care or other long-term care services is also noteworthy.

Table 12

Percent of satisfaction of enrollees, by plan

Level of satisfaction	Plan			
	SHARE	MedCenter	Nicollet-Eitel	HMO Minnesota
	Percent of enrollees			
Overall, very satisfied	85.9	91.5	90.5	89.4
Overall, dissatisfied	3.0	2.5	0.2	1.7
Perceived quality of care (poor-fair):				
Professional competence	3.3	0.2	3.9	1.0
Physician's willingness to discuss problems	4.4	1.1	5.4	0.4
Courtesy of staff	2.4	0.8	2.3	2.1
Access (poor-fair):				
Freedom to choose physician	2.4	.1.1	2.8	3.1
Availability of emergency care	5.7	2.8	4.1	0.0
Waiting time after arrival	6.3	4.6	7.8	1.4
Ease of getting appointments	4.9	5.2	9.4	1.1
Premium and fees charges (poor-fair):	0.9	0.8	1.3	2.6
Amount of paperwork (poor-fair)	12.9	7.6	3.6	16.5
Received sufficient information on HMO before joining (yes)	95.3	95.4	95.1	91.8
Any problems with HMO that have caused concern (yes)	5.8	4.8	4.6	6.0
At some point wanted to see out-of-plan physician (yes)	9.9	8.3	7.5	7.0
Wanted a service the HMO did not cover (yes)	7.3	6.7	11.1	12.3

NOTE: HMO is health maintenance organization.

Table 13

Services wanted by enrollees that health maintenance organizations (HMO's) did not provide, by plan

Plan			
SHARE	MedCenter	Nicollet-Eitel	HMO Minnesota
Chiropractor	Foot care	Vision care	Vision care
Vision care	Dental care	Chiropractor	Prescription drugs
Foot care	Vision care	Dental care	Dental care
Dental care	Mental health	Foot care	Chiropractor
Homemaker	Chiropractor	Prescription drugs	Foot care
Nursing home	Prescription drugs		Homemaker
Prescription drugs			Mental health
			Nursing home

NOTE: Services are listed in order of descending frequency.

Discussion

Three variables appear important in identifying potential Medicare HMO joiners: insurance status, usual source of care, and health status.

In the Twin Cities, enrollees generally carried less private health insurance than nonenrollees. This suggests that the HMO's marketing research task is to distinguish beneficiaries who have no private health insurance. The HMO needs to convince beneficiaries that as a form of health insurance it is desirable. For beneficiaries with private health insurance, data indicating high levels of dissatisfaction with physician fees and paperwork provide ample evidence for emphasizing the cost and time savings potential of the HMO alternative.

Medicare beneficiaries without private health insurance coverage can be viewed as an important market segment for HMO's in the Twin Cities. The proportion of SHARE and Nicollet-Eitel enrollees who did not have private health insurance prior to joining these HMO's (42.2 percent and 41.5 percent, respectively) was greater than national estimates. Analyzing data from the National Medical Care Utilization and Expenditure Survey, Garfinkel and Corder (1985) report that approximately 33 percent of the aged Medicare population do not have private insurance in addition to Medicare coverage.

The HMO must also decide whether to focus marketing on beneficiaries who have used HMO affiliated physicians on a fee-for-service basis prior to joining (rollovers) or on beneficiaries with no prior affiliation with the HMO

(switchers). SHARE was the only HMO in the Twin Cities to have its enrollment predominated by switchers. An HMO committed to overall plan growth through relying on Medicare enrollment will ultimately need to convince beneficiaries to switch from their usual source of care.

Although 90 percent of Medicare beneficiaries have a usual source of care, not all beneficiaries are equally committed to what they would nominally define as this usual source of care. Once the HMO exhausts a reservoir of beneficiaries who use its physicians on a fee-for-service basis, resources must be expended to attract switchers. Staff and group model HMO's may have to expend the greatest amount of effort convincing beneficiaries that their usual source of care—whose professional competence, access, or amenities they are generally satisfied with—is worth giving up to obtain a superior benefit package or reduce out-of-pocket costs.

Under the 95 percent of AAPCC method of risk-based Medicare reimbursement provisions of TEFRA, it is to a plan's financial advantage to attract beneficiaries who are healthier than average as reflected in their health services use and cost patterns prior to enrolling. As indicated by self-reported measures of health status, all four of the Twin Cities plans attracted beneficiaries who are healthier than the fee-for-service groups to which they were compared.

In the early stages of Medicare enrollment, as evidenced in the Twin Cities, HMO enrollees are likely to be geographically concentrated in close proximity to the plan's primary care providers. Potential Medicare enrollees are thus likely to have personal characteristics (e.g., income, education, marital status) similar to the demographic profile of the areas surrounding HMO clinic sites or HMO-affiliated physicians' offices.

For example, the profile of the early SHARE enrollee is that of a married beneficiary with less than a high school education and a moderate income. SHARE's marketing campaign emphasized price promotions and word-of-mouth awareness, an approach that might be hypothesized to be successful in working class St. Paul neighborhoods with a high degree of informal communication. By contrast, MedCenter enrollees are more highly educated, with approximately one-third having had some college. MedCenter's positioning itself as a high quality provider with a philosophy of health promotion appears aptly suited to the relatively affluent suburban Minneapolis population surrounding the St. Louis Park Medical Center.

Even in market areas that have had prepaid health plans operating for a number of years such as the Twin Cities, HMO's will need to educate Medicare beneficiaries about the prepaid concept as an alternative to standard Medicare coverage. Titus (1982) found in a survey of 260 persons over the age of 65 conducted in the Twin Cities prior to the marketing of these Medicare demonstrations (i.e., August-November 1980) that 48 percent of respondents were familiar with the term "HMO" or "prepaid health plan." However, only 18 percent of the entire sample were able to indicate some operational knowledge of how an HMO differed from fee-for-service care.

Medicare beneficiaries became aware of the HMO alternatives in a variety of ways. Plans were free to devise their promotional strategies with thorough review of advertising materials by the Health Care Financing Administration to assure accurate description of standard Medicare coverage and other "truth in advertising" concerns. The demonstrations were not structured as controlled experiments in ways that would permit examining the impact on enrollment of different communications channels (e.g., television versus word-of-mouth). Effective marketing activities such as word–of–mouth, print advertising, and group presentations appear to interact.

The study results indicate the important role that word-of-mouth can play in the enrollment decision. Use of word-of-mouth as a selling strategy is contingent on the size of enrollment; as Medicare enrollment grows, the potential use of satisfied beneficiaries as sales agents increases. The data implies that if an HMO decides to rapidly enroll many beneficiaries, word-of-mouth can be relied on as a major influence on subsequent enrollments. As evidenced by SHARE's "SHARE with a friend" campaign, the word-of-mouth channel need not only unfold as a secondary effect of enrollment increases but it can also be recognized and cultivated as a deliberate marketing strategy.

The data further indicate the relative effectiveness of print over audio-visual media in influencing enrollment. Although 21 percent of SHARE enrollees reported hearing about the option from television, only 4.1 percent of respondents reported that television was most influential in their enrollment decision.

However, in large, urban markets, television creates awareness about the concept of a prepaid option to Medicare beneficiaries; and through repetition and reinforcement of the plan name (e.g., "Medicare and More," "SeniorCare," "Medicare-Plus"), it can establish brand recognition for a specific HMO. With the likelihood of multiple Medicare prepaid health plans in a single market, name recognition is important in HMO marketing. Creating an identifiable plan image through television may trigger a request for additional written material on which the decision to enroll is ultimately based.

With a goal of sustaining steady growth in Medicare enrollment, HMO's might be best served by expending resources on refining the messages communicated through written materials such as plan brochures or print advertisements. While further research is needed, it is assumed that the importance of print media advertising would increase under the following circumstances:

- Where the educational level of beneficiaries is higher.
- Where the plan needs to attract switchers in order to grow.
- Where the plan charges a premium.
- Where the plan's benefit package involves enrollee cost sharing.
- Where the plan's benefit package does *not* offer services that Medicare does not provide (e.g., eyeglasses, prescription drugs, hearing aids).

The data also suggest the importance of physicians as HMO sales agents. The role that physicians can play in convincing Medicare beneficiaries to enroll in a HMO is most evident in IPA's such as HMO Minnesota.

The role of the physician in HMO marketing to Medicare beneficiaries is worthy of considerably more research because

of the potential for introducing selection bias through this marketing channel. HMO's that choose to use affiliated physicians as marketing agents must take into account the inclination of individual physicians to differentially promote the HMO alternative to healthier or sicker beneficiaries. For those affiliated physicians who are placed at financial risk by the HMO, it is in their interest to recruit healthier beneficiaries and not suggest enrollment to sicker persons. Alternatively, physicians not at financial risk may view plan enrollment as in the best interest of beneficiaries most vulnerable to future health care costs.

In addition because of the role physicians can play in marketing, it is hypothesized that staff and, to a lesser extent, group model HMO's will need to spend more resources on marketing to achieve comparable levels of enrollment than IPA or network model HMO's, assuming a similar benefit package and pricing structure. It is hypothesized that this will be particularly true if enhancements in the HMO benefit package are marginal when compared with standard Medicare coverage.

HMO's and CMP's must recognize that a beneficiary will select a prepaid Medicare alternative only if its perceived value exceeds its price. Beneficiaries of all four plans cited good benefits and coverage most frequently as their principal reason for enrolling. Less than 20 percent of beneficiaries mentioned lower costs as the main reason for joining a plan.

Of particular interest is the relatively few beneficiaries citing good quality of care as their principal reason for enrolling in an HMO alternative. The high degree of enrollee satisfaction with all plans, coupled with the relatively small percent of beneficiaries who thought the plans should provide more benefits than were already being offered, confirms the perceived desirability of the HMO alternative for these beneficiaries in the Twin Cities market, at least at the time the survey was conducted.

Future directions

Since August 1982, the Office of Research and Demonstrations, Health Care Financing Administration, has continued to foster the growth of risk-based prepaid contracting by supporting Medicare competition demonstrations throughout the country. These Medicare competition demonstrations are based on a 95-percent of AAPCC model of prospective reimbursement and provide participating plans with an added financial incentive not found under TEFRA risk-based contracting. Under these demonstrations, HCFA did not mandate that the plan share savings with the beneficiaries in the form of additional benefits or reduced cost sharing. These demonstrations and the prepaid health plans that will contract with the Medicare program on a risk basis under TEFRA afford the opportunity to continue to examine many issues concerning competition and the marketing of Medicare alternatives.

In support of Medicare policies that afford beneficiaries greater choice in Medicare coverage, further research is needed on the roles that information on the prepaid Medicare concept and advertising individual HMO alternatives play in the enrollment decision. Under TEFRA, HMO's and competitive medical plans are prohibited from discriminatory marketing practices ". . . intended to recruit Medicare beneficiaries from higher income areas (usually an indicator of better health) without making a comparable effort to enroll Medicare beneficiaries from lower income areas" (*Federal Register,* January 10, 1985). The extent to which prepaid health plans devise marketing strategies that depend on market segmentation and whether such strategies result in biasing enrollment merits further research.

Congress has required HCFA in the Deficit Reduction Act of 1984, Public Law 98-369, to develop a regulation that all HMO's or competitive medical plans in a given market area hold a coordinated 30-day open enrollment period each year. The purposes for requiring coordinated open enrollment are to heighten interest in HMO's and CMP's, to sharpen competition between these organizations and the fee-for-service system, and to offer Medicare beneficaries the opportunity to compare, at the same time, the advantages in enrolling in one participating organization over another. In the Twin Cities demonstration, the impact of InterStudy's information dissemination role during the first coordinated open enrollment period and the relationship of this activity to subsequent enrollment was difficult to disentangle from the individual promotional efforts of the plans. In Portland, Ore., HealthChoice, a HCFA demonstration contractor, will play a role similar to InterStudy, that of an "information broker" counseling Medicare beneficiaries on their prepaid health care options. Whether the activities of an information broker result in improving consumer welfare in the purchasing decision will be evaluated.

The growth of enrollment in alternative Medicare plans is dynamic. To better understand the nature of this growth, research is needed on how acceptance of the HMO alternative diffuses from early joiners to later joiners, particularly through word-of-mouth. This research should be directed toward understanding the positive messages that Medicare beneficiaries communicate about the HMO alternative. Understanding these messages can then be translated by HMO's into refining advertising campaigns. HMO's must also take into account the effects that adverse publicity about their plan or the concept of prepaid health care in general may have on the word-of-mouth channel's impact on enrollment.

The diversity of prepaid health plans that will likely contract with the Medicare program under TEFRA provides the opportunity to study how management's strategic goals and, in particular, profit expectations affect competitively pricing and structuring benefit packages. Of particular importance is understanding the tension between aggressive marketing and HMO management's perception that such promotional activity may result in attracting less healthy beneficiaries. Of empirical interest is whether a marketing strategy that attempts to enroll rollovers attracts a favorable or adverse beneficiary selection in terms of health status. This

question is particularly important given that many TEFRA risk-based contracts will likely derive from Medicare cost contracts that already have a base of Medicare beneficiary enrollment.

In markets with multiple plans, it will be very instructive to study how prepaid health plans react to each others promotional efforts over time and how hospitals and fee-for-service physicians advertise in response to the growth of HMO's and CMP's. The assumption is that alternative plans in competition with each other and with the private health insurance and fee-for-service medical sectors will react swiftly to each other's price, product benefits, and projected image. Vigilant evaluation and redesign of marketing strategies will be essential to remaining competitive.

For example, with the exception of SHARE, which began marketing slightly before the other three plans, initial demonstration plan prices were introduced simultaneously. During the first year of the demonstration (1981), the high-option premiums at HMO Minnesota and MedCenter were approximately $7 higher than those at SHARE and Nicollet-Eitel. This pricing strategy may in part explain the higher enrollment of lower income beneficiaries of SHARE and Nicollet-Eitel. During the second year of the demonstration however, SHARE increased its premium $5 while high-option premiums at the other plans remained unchanged. SHARE's initial pricing strategy was tactical, setting a price that would establish market penetration and establish brand loyalty.

Research is needed on the interaction of price and quality in the enrollment decision. How much a plan's price (i.e., premium and cost sharing) helps Medicare beneficiaries frame their enrollment decisions, whether beneficiaries enrolling in low-cost plans are seeking a "bargain," and whether higher priced packages are viewed as being of higher quality than lower priced packages are all issues that require further exploration. This will be particularly true if the Medicare program continues to move in the direction of increasing competition among fee-for-service and capitated delivery systems through voluntary voucher experiments.

References

Anderson, O.W., et al.: *HMO Development: Minneapolis-St. Paul and Chicago. Preliminary Research Findings.* Center for Health Administration Studies, Graduate School of Business, University of Chicago, Apr. 1983.

Berki, S.E., et al.: Enrollment choice in a multi-HMO setting: The roles of health risk, financial vulnerability, and access to care. *Med Care* 15(2):95-114, 1977.

Bryan, F., Bergsten, J., and Weeks, M.: *Medicare Health Survey: Methodological Report. Evaluation of Medicare Capitation Demonstration. Volume 1.* Contract No. 500-81-0017. Prepared for the Office of Demonstrations and Evaluations, Health Care Financing Administration. Rockville, Md. Jurgovan and Blair, Inc. July 1983.

Eggers, P.W., and Prihoda, R.: Pre-enrollment reimbursement patterns of Medicare beneficiaries enrolled in 'at-risk' HMO's. *Health Care Financing Review. Vol. 4, No. 1.* HCFA Pub. No. 03146. Office of Research and Demonstrations, Health Care Financing Administration, Washington. U.S. Government Printing Office, Sept. 1982.

Federal Register: Medicare program; payment to health maintenance organizations and competitive medical plans. No. Washington, D.C., Jan. 10, 1985.

Friedman, B., LaTour, S., and Hughes, E.: A Medicare Voucher System: What Can It Offer, in *Proceedings of the Conference on the Future of Medicare.* SubCommittee on Health of the Committee on Ways and Means, U.S. House of Representatives, Washington. U.S. Government Printing Office, Feb. 1, 1984.

Garfinkel, S.A. and Corder, L.S.: Supplemental health insurance coverage among aged Medicare beneficiaries. *National Medical Care Utilization and Expenditure Survey.* Series B, Descriptive Report No. 5. DHHS Pub. No. 85-20205. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, 1985.

Gaus, C.: Who enrolls in a prepaid group practice: The Columbia experience. *Johns Hopkins Medical Journal* 128(1): 9-14, Jan. 1971.

Haines A.C.: Impressions of marketplace competition in the Twin Cities. *Hospital and Health Services Administration* 28(3): 27-42, May-June 1983.

Marketplace competition is flourishing in the Twin Cities. *Hospitals* 57(22): 62, 64, Nov. 16, 1983.

Iglehart, J.K.: The Twin Cities' medical marketplace. *N Engl J Med* 311(5):343-348, Aug. 2, 1984.

InterStudy: *A Medicare Multiple Choice Program for Minneapolis and St. Paul. Final Report.* Contract No. 500-78-0081. Prepared for the Office of Research and Demonstrations, Health Care Financing Administration. Excelsior, Minn. InterStudy, Inc. Apr. 1984.

Kasper, J., and Barrish, G.: Usual sources of medical care and their characteristics. *National Medical Care Expenditures Survey,* Data Preview 12. National Center for Health Services Research, Public Health Service. Hyattsville, Md. Oct. 1982.

LaTour, S.: Health Care Consumers: Perspectives From Marketing and Psychology. Working draft, Center for Health Services and Policy Research, Northwestern University, June 15, 1980.

Luft, H.: *The Operations and Performance of Health Maintenance Organizations: A Synthesis of Findings from Health Services Research.* National Center for Health Services Research Contract Report Series, Public Health Service, Department of Health and Human Services, Oct. 1981.

Owen, E.: Case-study of Marketing Activity in the Twin Cities Medicare Capitation Demonstrations (draft). Contract No. 500-81-0017. Prepared for the Office of Demonstrations and Evaluations, Health Care Financing Administration. Rockville, Md. Jurgovan and Blair, Inc. June 1983.

Schlenger, W., Wadman, W., and Corder, L.: Health status of aged Medicare beneficiaries. *National Medicare Care Utilization and Expenditure Survey,* Series B, Descriptive Report No. 2. DHHS Pub. No. 83-20202. Office of Research and Demonstrations, Health Care Financing Administration. Washington. U.S. Government Printing Office, Sept. 1983.

State of Minnesota, Department of Insurance: *Report on Medicare Supplemental Insurance Policies,* 1982.

Titus, S.: Barriers to the health maintenance organization for the over 65's. *Social Science and Medicine* 16(20): 1767-1774, 1982.

Appendix 1.
Premiums and benefit packages

Table A

Monthly Medicare premium structure: Twin Cities demonstrations

Year and health plan	Medicare premium	
	Low option	High option
1981		
SHARE	$13.95	$14.95
MedCenter	15.75	27.75 (drugs) 21.95 (no drugs)
Nicollet-Eitel	12.50	16.55
HMO Minnesota	21.75	22.85
1982		
SHARE	18.75	19.75
MedCenter	16.95	27.75 (drugs) 21.95 (no drugs)
Nicollet-Eitel	12.50	16.55
HMO Minnesota	27.50	22.85
1983		
SHARE	18.75	19.75
MedCenter	16.95	27.75 (drugs) 21.95 (no drugs)
Nicollet-Eitel	14.50	26.00 (drugs) 18.50 (no drugs)
HMO Minnesota	27.50	18.95
1984		
SHARE	18.75	19.75
MedCenters[1]	14.95	25.25 (drugs) 19.95 (no drugs)
HMO Minnesota	17.50	17.95

[1]MedCenters is the new name for the merged MedCenter and Nicollet-Eitel health plans.

Table B

Benefit structure for high and low options by plan

Benefits	Plans			
	HMO[1] Minnesota	MedCenter	Nicollet-Eitel	SHARE
Inpatient care	Low option: Covered in full up to 90 days per benefit period. 60-day lifetime reserve. High option: Covered in full 365 days per benefit period.	Low option: Covered in full up to 90 days per benefit period. 60-day lifetime reserve. High option: Covered in full 365 days per benefit period.	Low option: Covered in full up to 90 days per benefit period. 60-day lifetime reserve. High option: Covered in full 365 days per benefit period.	Low option: Covered in full up to 90 days per benefit period. 60-day lifetime reserve. High option: Covered in full; no limit.
Outpatient care and physician services				
Episodic	Covered in full; no limit.	Covered in full; no limit.	Covered in full; no limit.	Covered in full; no limit.
Lab and X-ray	Covered in full; no limit.	Covered in full; no limit.	Covered in full; no limit.	Covered in full; no limit.
Emergency care	Plan hospital: $15 unless admitted. Nonplan hospital: 20 percent of first $500.	Plan hospital: $15 unless admitted. Nonplan hospital: 20 percent of first $500.	Plan hospital: $15 unless admitted. Nonplan hospital: 20 percent of first $500.	Plan hospital: $15 unless admitted. Nonplan hospital: 20 percent of first $500.
Physical exam	Low option: Not covered. High option: Covered in full.	Low option: Not covered. High option: Covered in full.	Low option: Not covered. High option: Covered in full.	Low option: Not covered. High option: Covered in full.
Immunization	Low option: Same as Medicare. High option: 100 percent covered.	Low option: Same as Medicare. High option: 100 percent covered.	Limited to cases of direct exposure and allergy.	100 percent covered.
Hearing exam	High option: $10 copayment.	High option: Covered.	High option: Covered.	High option: Covered.
Skilled nursing care	Low option: 1 hospital day required per 100 days per benefit period. High option: 1 hospital day required per 365 days per benefit period.	Low option: Covered in full up to 100 days per benefit period. High option: Covered in full up to 365 days per benefit period.	Covered in full up to 100 days per benefit period.	Low option: 1 hospital day required per 100 days per benefit period. High option: 1 hospital day required per 365 days per benefit period.
Home health care	200 visits per benefit period.	200 visits per benefit period.	200 visits per benefit period.	Low option: 200 visits per benefit period. High option: 250 visits per benefit period.
Private duty nursing	High option: Covered in full during eligible hospital admission.	Not covered.	Not covered.	Not covered.

Table B—Continued

Benefit structure for high and low options by plan

Benefits	Plans			
	HMO[1] Minnesota	MedCenter	Nicollet-Eitel	SHARE
Ambulance	Covered in full.	Covered in full.	80 percent coverage.	Covered in full.
Mental health				
Inpatient	90 days per benefit period; 190 days in lifetime.	60 days in full; 61-90 days; $35 per day; 190 days lifetim⌣ maximum.	190 days in lifetime.	Low option: 60 days full; 61-90 days; $25 per day; 90-day benefit period, 190 days maximum. High option: 60 days in full; 61-90 days; $11 per day; 190-day maximum.
Outpatient	Low option: 80 percent covered, to $500 per year. High option: 80 percent covered to $1,000 per year.	10 visits per year; $20 each visit.	7 visits per year; $10 each visit. 20 visits for chemical dependency.	Low option: 20 visits; $10 per visit. High option: 20 visits; $5 per visit.
Physical therapy	Covered in full.	Covered in full.	Covered in full.	Covered in full.
Radiation therapy	Covered in full.	Covered in full.	Covered in full.	Covered in full.
Prescription drugs	Not covered.	Not covered.	Covered—$3.50 per prescription.	Not covered.
Eye exam	High option: Covered. $15 copayment.	High option: Covered in full.	High option: Covered in full.	High option: Covered in full.
Eye glasses	Lenses, post-cataract surgery patients only.	Lenses, post-cataract surgery patients only.	Lenses, post-cataract surgery patients only.	Lenses, post-cataract surgery only.
Prosthetic devices and durable medical equipment	Covered in full.	Covered in full.	80 percent covered.	Covered in full.
Dental care	Surgery of jaw and related structures only.	Surgery of jaw and related structures only.	Surgery of jaw and related structures only.	Surgery of jaw and related structures only.
Chiropractic	Manipulation of spine to correct subluxation—clinic only.	Manipulation of spine to correct subluxation—clinic only.	Manipulation of spine to correct subluxation—clinic only.	Manipulation of spine to correct subluxation—clinic only.
Podiatrist	Covered except routine foot care.	Covered except routine foot care.	Covered except routine foot care.	Covered except routine foot care.

[1]Health maintenance organization.

Appendix 2. Survey methodology

Calculation of estimated sampling errors

Standard errors for selection of estimated percentages were calculated for the four HMO enrollee populations and for the nonenrollee population standardized to the age by sex by location characteristics of their respective HMO populations. The Research Triangle Institute standard error program SESUDAAN[1] was used for the calculations. This program takes into account all of the complexities of the sample design, including stratification, selection with unequal probabilities and use of compensating sample weights, selection from finite populations, and use of standardizing or balancing weights.

Sampling errors were computed for each of the four HMO populations on 201 estimated population percentages. A summary of the results of these calculations is presented in the top portion of Table C, in the form of measures of design effects (DEFF). The design effect is a measure of the inefficiency of the sample design as compared with a simple random sample of the same size. It is computed as

$$\text{DEFF} = \frac{\text{Var } \hat{P}_{cs}}{\text{Var } \hat{P}_{srs}},$$

where $\text{Var } \hat{P}_{cs}$ = estimated error variance reflecting all complexities of the complex sample design

$\text{Var } \hat{P}_{srs}$ = estimated error variance for a simple random sample the same size.

A DEFF < 1.00 indicates a sample design that yielded more precise estimates than a comparable simple random sample, and a DEFF > 1.00 indicates a sample design producing less precise estimates. The summary sampling error information for HMO Minnesota, for example, is recorded in the first line of the table. The sample size is 294, and the number of survey eligibles in the HMO Minnesota population is estimated to be 306. Of the 201 percentages for which sampling errors were computed, the lowest design effect (or DEFF) is 0.00, the highest is 0.19. The average DEFF is 0.0374, and its square root is 0.19. For the nonenrollee population, only standardized estimates have been tabulated. Sampling errors were, therefore, calculated for a selection of 157 standardized estimates for each of the population standardizations, and the results of these calculations are summarized in the lower portion of Table C1. Note that four separate calculations were made for nonenrollees in the Minneapolis area, standardizing to each of the four Minneapolis area HMO's.

Construction of generalized sampling error tables

Each estimated population percentage or frequency has its own associated sampling error that can itself be estimated from the survey data. Rather than computing sampling errors for each of the millions of estimates that could be produced, a simpler and less costly procedure is to calculate sampling errors for a selection of items. The results of the calculations are then used to construct generalized tables.

A generalized sampling error table for the MHS has been constructed using the results summarized in Table C, and it is presented as Table D. The sampling errors in Table D were calculated as follows:

$$S.E.\ (\hat{P}) = [(\text{Average } DEFF).\ \frac{\hat{P}(100)-\hat{P}]^{1/2}}{n},$$

where $\hat{P}$ = estimated percentage
n = sample size.

This procedure merely adjusts the simple-to-calculate error variance of an estimated $\hat{P}$ based on a simple random sample to account for the effects of using a more complex sample design. Using the average design effects as an adjustment factor provides a rough order-of-magnitude estimate of the sampling error. For any particular estimate $\hat{P}$, the sample error may be somewhat lower or higher than that listed in Table D.

Instructions for using Table D

It is estimated that 34.1 percent of the survey eligible SHARE HMO population had at least one visit with a medical doctor during the month preceding the interview. The base of this estimated percentage is 4,092, the entire survey eligible population of SHARE HMO. The sampling error for the estimated 34.1 percent can be obtained from the SHARE HMO section of Table D, in the "4,092" line, since the base of the estimated percentage is 4,092. Reading across, an estimate of 50 percent would have an associated 3.2 percentage point sampling error while an estimate of 20 percent would have a 2.5 percentage point sampling error. Interpolating, the sampling error for an estimate of 34.1 percent is 2.8 percentage points.

Confidence limits can be established as follows. With repeated sampling a) the probability of 0.68 that the interval $[\hat{P} \pm 1\ S.E.\ (\hat{P})$ *to* $\hat{P} \pm S.E.\ (\hat{P})]$ spans the true population percentage P, and b) the probability is 0.95 that the interval $\{\hat{P}-2\ [S.E.\ (\hat{P})]$ *to* $\hat{P} \pm 2[S.E.\ (\hat{P})]\}$ spans the true population percentage P.

For the estimate of 34.1 percent, the 68 percent confidence limits are, therefore, 34.1 - 2.8 to 34.1 + 2.8 or 31.3 to 36.9 percent. The 95-percent confidence limits are 34.1 - 2(2.8) to 34.1 + 2(2.8) or 28.5 to 39.7 percent.

A comparable estimate for the Minneapolis nonenrollees standardized to the SHARE HMO population can be found. Based on nearly the entire population, 25.8 percent of the SHARE-standardized Minneapolis nonenrollee population are estimated to have had a visit with a medical doctor during the month preceding interview. Using the right hand SHARE HMO section of Table D (nonenrollees standardized to SHARE HMO), the line marked 127,271 (because the base was 124,196 representing nearly the entire nonenrollee population) and interpolating, the standard error for the estimated percentage 25.8 is found to be approximately 2.8

[1] Shah, B.V., *SESUDANN: Standard Errors Program for Computing of Standardize Rates from Sample Survey Data,* Research Triangle Institute, Research Triangle Park, N.C., April 1981.

percentage points. The 68-percent confidence interval for the estimated 25.8 percent is 23.0 to 28.6 percent. The 95-percent confidence interval is 20.1 to 31.4 percent.

The standard error of the difference between the two estimated percentages can be obtained as follows:

$$S.E.(\hat{P}_1 - \hat{P}_2) = \{[S.E.\ (\hat{P}_1)^2 + S.E.(\hat{P}_2)]^2\}^{1/2}.$$

Therefore, to determine whether the difference $\hat{P}_1 - \hat{P}_2$ is significant, where in the example, $\hat{P}_1 = 34.1$ percent and $\hat{P}_2 = 25.8$ percent, we calculate

$$S.E.(\hat{P}_1 - \hat{P}_2) = [(2.8)^2 + (2.8)^2]^{1/2} = 3.96$$

$$t = \frac{\hat{P}_1 - \hat{P}_2}{S.E.(\hat{P}_1 - \hat{P}_2)} = \frac{34.1 - 25.8}{3.96} = \frac{8.3}{3.96} = 2.10.$$

By consulting a normal curve table, one finds that the probability of a difference this large or larger occurring by chance is 3.6 percent. The difference between the two populations on these characteristics may, therefore, be said to be significant at the 3.6-percent level.

Table C

Population and sample sizes and design effects

Population	Population size	Sample size	Number of estimates	Range of DEFF's		Average DEFF	$(DEFF)^{1/2}$
				Lower	Highest		
Enrollees:							
HMO Minnesota	306	294	201	.00	0.19	0.0374	0.19
MedCenter HMO	535	312	201	.00	1.49	0.7385	0.86
Nicollet-Eitel HMO	515	285	201	.00	1.40	0.7367	0.86
SHARE HMO	4,092	300	201	.02	2.00	1.2154	1.10
Nonenrollees standardized to:							
HMO Minnesota	127,271	472	157	.03	5.90	2.0898	1.45
MedCenter HMO	127,271	472	157	.05	5.88	2.3060	1.52
Nicollet-Eitel HMO	127,271	472	157	.08	4.97	2.4964	1.58
SHARE HMO	127,271	472	157	.02	4.40	2.2027	1.48

NOTE: DEFF's=design effects; HMO is health maintenance organization.

Table D

Sampling errors of estimated percentages

HMO and population base	Estimated percent			Nonenrollee standardized to	Population base	Estimated percent		
	50	20	10			50	20	10
HMO Minnesota				**HMO Minnesota**				
306	0.6	0.4	0.3		127,271	3.3	2.7	2.0
(294)					(472)			
153	0.8	0.6	0.5		63,636	4.7	3.8	2.8
(147)					(236)			
MedCenter HMO				**MedCenter HMO**				
535	2.4	1.9	1.5		127,271	3.5	2.8	2.1
(312)					(472)			
268	3.4	2.8	2.1		63,636	4.9	4.0	3.0
(156)					(236)			
Nicollet-Eitel HMO				**Nicollet-Eitel HMO**				
515	2.5	2.0	1.5		127,271	3.6	2.9	2.2
(285)					(472)			
258	3.6	2.9	2.2		63,636	5.1	4.1	3.1
(143)					(236)			
SHARE HMO				**SHARE HMO**				
4,092	3.2	2.5	1.9		127,271	3.4	2.7	2.0
(300)					(472)			
2,046	4.5	3.6	2.7		63,636	4.8	3.9	2.9
(150)					(236)			

NOTE: HMO is health maintenance organization. Numbers in ( ) refer to sample size. For example, for HMO Minnesota the estimated population size is 306. This estimate was based on a sample of 294 interviewed cases. Consideration was also given to estimates based on only half the sample. In the case of HMO Minnesota, this would be 147 sample interviewed cases, yielding an estimated population size of about 153.

☆ U.S. GOVERNMENT PRINTING OFFICE : 1985 O - 487-482

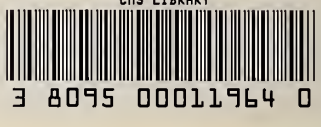
U.S. DEPARTMENT OF
HEALTH AND HUMAN SERVICES
HEALTH CARE FINANCING ADMINISTRATION
OFFICE OF RESEARCH AND DEMONSTRATIONS
6325 SECURITY BLVD.
BALTIMORE, MARYLAND 21207

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF H.H.S.
HHS-392

SPECIAL FOURTH CLASS
BOOK RATE

CMS LIBRARY



U.S. Department of Health and Human Services
Health Care Financing Administration
Office of Research and Demonstrations
HCFA Pub. No. 03212 August 1985